Journal of Contemporary History Copyright © 1998 SAGE Publications, London, Thousand Oaks, CA and New Delhi, Vol 33(1), 117–33.
[0022-0094(199801)33:1;117–33;002233]

John Sheail

'Never Again': Pollution and the Management of Watercourses in Postwar Britain

For the first volume of his postwar history of Britain, Peter Hennessy chose the title, *Never Again*, to sum up the mood of the country in the first six years of peace. In all areas of activity, assurances were sought as to the progress being made in escaping from the muddle and deprivation that seemed to characterize the interwar years.[1] The annual Buckland Lectures for 1950, which traditionally dealt with a fisheries topic, identified advances in the provision of water supplies, housing and access to the countryside. The lecturer, H.D. Turing, had in mind the Water Act of 1945, the New Towns Act of 1946, and the National Parks and Access to the Countryside Act of 1949. The subject of Turing's lectures was 'River pollution'. An obvious gap in the government's legislative programme was the omission of 'any really large-scale attempt to stop the horrible and quite unjustifiable pollution of our rivers'.[2] Even here, the deficiency was soon repaired. The Rivers (Prevention of Pollution) Act followed in 1951.

How far did the delay in legislation arise from the low priority given to river pollution, as opposed to the difficulty of tackling so fundamental an issue? Most legislation of that period was of an enabling kind. Statutory boards were established to reorganize the basic utilities (such as coal and electricity). The powers of local authorities were enhanced to deal with town and country planning. As intended, one piece of legislation might pave the way for another. The Mineral Workings Act of 1951 drew on the provisions of the Town and Country Planning Act of 1947 to provide for the rehabilitation of worked-out areas and avoidance of further dereliction in the East Midlands iron-ore field.[3] An incremental pattern may similarly be found in legislation that enabled rivers to be managed more closely. The River Boards Act of 1948 built on existing institutional structures and experience to create a more effective framework for regulating watercourses and their catchments. Under the Rivers (Prevention of Pollution) Act, the River Boards were given powers to repair

1 P. Hennessy, *Never Again: Britain 1945–51* (London 1992).
2 H.D. Turing, *River Pollution, being the Buckland Lectures for 1950* (London 1952), 9.
3 J. Sheail, '"Deserts of the Moon". The Mineral Workings Act and the Restoration of Ironstone Workings in Northamptonshire, 1936–1951', *Town Planning Review*, 54 (1983), 405–24.

the damage of the past and to minimize, if not eliminate, river pollution in the future.

In pursuing the postwar theme of 'Never again', there is a risk of exaggerating the ease with which a postwar generation might shake off the constraints of the past in adopting a more centralist, strategic stance. Within the chronology of water-resource development, this article will first review the concern felt at the increasingly polluted state of Britain's rivers. A case study of the rivers Ouse and Cam highlights the frustration expressed over the piecemeal approach adopted, and limited resources available, for pollution control. Both voluntary and statutory bodies were appalled to discover that some of the greatest threats arose from initiatives being taken to improve the urban environment and land-use planning generally. Four of London's New Towns had been located in a single catchment, the river Lee. For central and local government, the room for manoeuvre was severely limited not only by a clash in priorities for environmental improvement, but also by hostility towards more centralized structures. As was demonstrated by the Court injunctions brought against polluters on the river Derwent below Derby, the public would only tolerate the granting of greater powers to the various organs of government if there was tangible benefit to all sectors of the community. Given the rudimentary state of environmental management, in both an administrative and technical sense, that assurance could not be given.

Historians of the amenity, wildlife and outdoor-recreational movements have described how the opportunities of postwar reconstruction were seized upon in promoting the concepts of national parks, nature reserves, and generally greater access to the countryside.[4] Much less attention has been given to fisheries conservation. Here, too, there was considerable activity. The Annual Report of the British Field Sports Society for 1945–6 recorded how, on the recommendation of its Fisheries Committee, it had decided to take immediate steps to collect particulars of pollution so as to provide 'impressive' evidence for the use of those fighting the evil in the press and parliament.[5] The first series of reports, of which 20,000 copies were printed, dealt with fast-running rivers, and the second and third series with those 'so dear to the angler of coarse fish'. The fourth covered the Scottish rivers.[6]

In his introduction to the three reports for England and Wales, the Chairman of the Society's Fisheries Committee, John Rennie, emphasized both the urgency and the wider relevance of the issue. The law controlling pollution had to be strengthened before it was too late to prevent the life of 'our most

4 G.E. Cherry, *Environmental Planning. Volume II. National Parks and Recreation in the Countryside* (London 1975); J. Sheail, 'The Management of Wildlife and Amenity — A UK Post-war Perspective', *Contemporary Record*, 7 (1993), 44–65.

5 British Field Sports Society archive, Annual Reports 1945–6 to 1950–1.

6 H.D. Turing, *First of a Series of Reports on Pollution affecting Rivers in England and Wales* (London 1947); *Second Series* (London 1947); *Third Series* (London 1949); *Fourth Series of Reports on Pollution affecting Rivers in Scotland* (London 1949).

beautiful rivers' from being exterminated. It was not simply a matter of concern to 'the millions of anglers for whom we principally speak', but a question that fundamentally affected the health and welfare of the general population. In Rennie's words,

> There is nothing more beautiful than one of our clean English streams flowing through lush meadows and pastures by tree-lined banks and past quiet hamlets to the sea, unless perhaps it is one of our Welsh or Scottish mountain streams, dancing and tumbling over the rocks to a music which is one of Nature's purest songs.

Substitute for this a receptacle for filth and garbage, green, yellow and brown, lifeless and nauseating, and 'you have a contrast which it is difficult to equal in any other medium'. A leaflet was published and widely distributed by the Society, comprising a photograph of the river Colne, covered in froth, and the words, 'Only new strong legislation can provide a cure for this man-made sickness which grips our rivers'.

The four reports were compiled by H.D. Turing, the editor of the *Salmon and Trout Magazine*, and formerly Angling Editor of the journal, *The Field*.[7] In addition to the support given by bodies represented on the Committee, namely the National Association of Fishery Boards, the Salmon and Trout Association, Flyfishers Club, and the Scottish Salmon Angling Association, considerable advice and assistance were obtained from the Central Council for Rivers Protection and the Pure Rivers Society. Copies of the reports were sent to the press, parliament, government departments, learned and voluntary societies, sporting hotels, clubs and the tackle trade.

By the third report, Rennie could speak of the reports having had a remarkable effect. Rather than mere generalities, details of specific instances of pollution could be cited. In an Adjournment Debate of April 1950 on the river Irwell, the local Member of Parliament for Rossendale, Anthony Greenwood, recounted how he had urged Turing to include the Irwell in his survey. Greenwood and other speakers made detailed reference to the data Turing had collected and published on the Lancashire river. Perhaps 'the hardest working river in the whole of the United Kingdom', the Irwell received the discharges of some 210 trade premises and 54 sewage disposal works by the time it reached the Manchester Ship Canal. The report was cited in describing how the most serious pollutants were those from the papermills, sulphide dyers and tanneries. Because esparto grass and wood were still in such short supply, larger quantities of straw and, therefore, caustic soda had to be used for pulping purposes. Sulphide dyeing was both cheap and in great demand for blackout material and khaki. The impact of the effluent could be gauged from the observation of a senior councillor in Baccup. At eight o'clock one morning in November, the river had been a vivid orange, with suds rising 18 inches above the water. By midday, it had become an intense black.[8]

7 G.C. Pollock, 'H.D. Turing', *Salmon and Trout Magazine*, 131, (1951), 2–3.
8 Parliamentary Debates (PD), Commons, 474, 91–106.

Turing's reports emphasized what had already been found in surveys carried out by a Standing Committee of the Ministry of Agriculture and Fisheries in the 1920s, and the Joint Advisory Committee to the Ministries of Health and Agriculture in the 1930s, namely that pollution might be particularly acute within and below the heavily industrialized conurbations, but instances of significant pollution could be found on almost every watercourse.[9] More was required, however, than simply an inventory as to where this pollution might occur. As with the White Paper written by John Dower on national parks,[10] Turing's reports on the principal fisheries combined detailed description with more general prescriptions as to what, in a positive sense, was required. Writing of the Great Ouse, Turing saw the need for a body, sufficiently equipped with the powers, resources and technical insight, to protect the river throughout its catchment. From accurate and continuous records of all discharges to the river, however small and innocuous each might seem to be, better provision could be made for the larger centres of population, the extension of mains sewerage to more rural areas, and for the needs of industry, wherever it might be located.

An appraisal of river administration, published in 1948, described how, where there should have been a cultivated garden, a competitive jungle was to be found. For the most part, the only form of co-ordinated management was the fishery boards, established under the Salmon and Freshwater Fisheries Act of 1923. Almost entirely dependent for their income on the licence fees of anglers, they had to police the rivers with 'the velvet glove of negotiation'.[11]

The geographical variety and often complex trends in river usage were graphically illustrated by the interwar experiences of the Ouse and Cam Fisheries Board. With 30,000 licence-holders, it had responsibility for the important coarse-fishing stream of the Great Ouse, from its source near Brackley, in Buckinghamshire, through the predominantly agricultural East Midlands, to the North Sea. Although the catchment had come through the Industrial Revolution relatively unscathed, Turing warned of how the four sugar-beet refineries established on its banks in the interwar years might presage a new generation of rurally-based industry. The wastes contained in the washing and process waters were organic in character, and highly polluting.[12] The earliest attempts to treat the effluent at the refinery near Bury St Edmunds seemed at first effective. After some eight to nine years, however, the land over which the waste waters were irrigated became 'sick'. The effluent contained so much sugar that the river Lark became full of 'sewage fungus' and its waters unfit for restocking with fish.

9 J. Sheail, 'Pollution and the Protection of Inland Fisheries in Inter-war Britiain' in M. Shortland (ed.), *Science and Nature: Essays in the History of the Environmental Sciences* (London 1993), 41–56.

10 J. Dower, *National Parks in England and Wales*, HMSO, Cmd 6628 (London 1945).

11 J.W. Kempster, *Our Rivers* (London 1948), 108.

12 Public Record Office (PRO), MAF 41, 1463; Turing, *Third Series*, op. cit., 10–15.

The fact that watercourses might be affected by more than one source of pollution often led to claims of partiality. As the District Inspector pointed out in October 1943, the 'Sugar Factory people' at Ely both despised and distrusted the Fisheries Board, which seemed only too anxious to blame them for fish mortality, but strangely reluctant to take a strong line with the real culprits, the Ely sewage farm which, to the certain knowledge of the Fishery Inspector, had been responsible for at least six serious mortalities over the previous ten years. Often from their position as local-authority representatives, members of a Board were acutely aware of the difficulties under which the sanitary bodies operated. In August 1938, for example, the works at Bedford had to cope with a sudden 'rush of storm water'. To have stemmed the flood-water would have increased flooding in the town. Thousands of tons of raw sewage were 'shot' directly into the Great Ouse. Some 7–8 tons of fish were killed.

Turing singled out the sewage works at Huntingdon as being in a particularly parlous state. When large numbers of fish died over a distance of seven miles below the sewage works, the first impulse of the Executive of the Fisheries Board, in July 1933, had been to prosecute the Corporation. The number of people coming to Huntingdon for fishing holidays fell dramatically. The 'trades people of the town were up in arms against the Corporation for the calamity'. The Town Clerk insisted that the trouble had arisen from the effluent discharged into the sewers by a canning factory opened by Messrs Chivers and Sons, three years previously. At the height of the pea-canning season, some ten times more effluent had been discharged than was permitted under the agreement with the Council. The Board agreed to take no further action provided there was an admittance of responsibility and an undertaking not to pollute the river again, together with payment of £200 towards re-stocking the river. Having won recognition that it was only partly responsible for the incident, and having persuaded Chivers to find the money, the Corporation accepted the terms and denied the cannery access to the public sewers.

Chivers had no alternative but to install a plant that removed the worst of the liquid effluent, which was taken by two tanker wagons to a field four miles away for dumping. More effective screens prevented any solid matter entering the effluent. The reduction in temperatures and increased oxygen of the can-cooler water, as it passed through a newly-built cooling tower, meant that it was now impossible to distinguish it from the water originally abstracted from the river. There was, however, little improvement in the state of the river. The Town Council nevertheless rejected plans for a new sewerage works, and simply resolved, in September 1935, to build further septic tanks and screening chambers as a 'temporary measure'. Having been forced to spend £3,000 in dealing with its own effluents, Chivers protested at the further prospect of the Corporation being allowed to do 'practically nothing'.

Even where the scale and cause of fish losses were beyond doubt, it was difficult to secure a successful prosecution. In February 1939, over half the fish

in a 30-mile stretch were killed when a tank at the Cambridge gas works burst, spilling 24,800 gallons of highly concentrated gas liquor into the Cam. Urgent steps had to be taken by the Medical Officer of Health to stop the inhabitants of Upware, and other settlements by the river, drinking the water. Legal proceedings were, however, adjourned *sine die*, following an undertaking by the gas company to pay the Fisheries Board's legal costs and not to pollute the river again. There was no admission of liability or negligence. Counsel advised the Board to agree, since it would otherwise be necessary, under the Salmon and Freshwater Fisheries Act of 1923, to prove that the defendants had 'carried out or knowingly permitted' the effluent to flow into the river. The company intended to prove that there was a flaw in the internal structure of the six-year old tank that could be neither seen nor anticipated. It had therefore been an accident, an Act of God, over which the company had no control.

The concept of river conservation was based on the unit of management being the entire river basin, and all aspects of river use being co-ordinated under a single body. Although an essay published in 1879 portrayed the subdivision of England and Wales into watershed districts as an 'absolute necessity', it took almost a century for that to be achieved, and for the three essential strands of river management to be brought together — namely, the prevention of flooding and pollution, and the provision of water supplies.[13]

Even the most cursory of chronologies highlights the importance of the post-war years of the 1940s and early 1950s in the development of a more holistic approach. Under the River Boards Act of 1948, the powers of the Fishery Boards, the Catchment Boards set up under the Land Drainage Act of 1930 for the purposes of flood prevention and land drainage, and of local authorities under the Rivers (Pollution Prevention) Act of 1876, were subsumed within those of the newly-appointed Rivers Boards. Not only would the Boards have sole jurisdiction for the fisheries, pollution prevention and the river gauging of watercourses, regardless of local government boundaries, but their respective catchments or group of catchments would be large enough to secure the resources required for employing technical and scientific staff, and the facilities for survey, investigation and research. Through the further measure, the Rivers (Prevention of Pollution) Act of 1951, the Boards might grant licences permitting a new discharge, subject to conditions as to its quality and quantity. Essentially, pollution control was to be achieved through the attachment of conditions to the consents given.[14]

Among the models for this more comprehensive approach to river management was the Lee Conservancy Board, established in 1868 as a consequence of the exceptional pressures on the watercourse, both as a source of surface

13 E. Porter, *Water Management in England and Wales* (Cambridge 1978); F. Toplis, 'Suggestions for Dividing England and Wales into Watershed Districts', *Journal of Society of Arts*, 27 (1879), 696–709.

14 Rivers (Prevention of Pollution) Act, 1951, 14 and 15 George VI, c. 64.

and underground water supplies for Greater London, and as a conduit for domestic and trade wastes through the lower part of its course into the river Thames. The Board, whose unusually wide powers included pollution control, comprised 14 members elected by local authorities and one by barge-owners. Paradoxically, it was this catchment, perhaps more than any other, that was most threatened by major initiatives taken by the postwar Labour government to improve living conditions within London.

Even as the postwar legislation for controlling river pollution was being formulated, the seeds for future conflict were being sown in the decisions taken as to how the future growth of London and other principal cities might be directed. Although the concept of New Towns had been pressed by the Garden City Movement, and then Abercrombie's *Greater London Plan* of 1944, it was largely through the personal enthusiasm of the Minister of Town and Country Planning, Lewis Silkin, that it was so vigorously promoted, first by a departmental committee under Lord Reith, and then by the New Towns Act of 1946. Of the towns to be identified, Stevenage was designated first, then Harlow in 1947, and Hatfield and Welwyn Garden City in 1948. According to Cherry, they were to be the jewels in the crown of centralist planning — a rational answer to the unplanned sprawl of the 1930s.[15]

Turing warned of the consequences of the 'satellite towns and other expansive developments in Hertfordshire' being allowed to drain into the Lee. The discharges from the fast-expanding manufacturing centre of Luton already demonstrated the importance of conserving a large volume of clean water in a river, irrespective of the standards achieved by local treatment and disposal works.[16] The Engineering Inspector of the Ministry of Health similarly insisted on the need for the most thoroughly-integrated approach to the management of the water resources of the Lee Valley. As early as October 1946, he had commissioned a joint study from the civil engineering consultants, Messrs D. Balfour and Sons and Messrs J.D. and D.M. Watson. Their report of March 1947 emphasized how the dual use of the river for water abstraction and disposal of effluent had already become irreconcilable. Some 13 million gallons of sewage effluent per day (mgd) were already discharged into the river, above the abstraction point for the King George V Reservoir, compared with a dry weather flow of 15 mgd. Even if the standard of effluent had reached the minimum prescribed by the Royal Commission on Sewage Disposal earlier in the century, the river would still have been overloaded.[17]

Since both uses of the river had to continue, the joint consultants could do little more than recommend ways of minimizing the threat to 'amenities' of the Lee and its tributaries, by recommending that there should be three treatment

15 F. Schaffer, *The New Town Story* (London 1972); G.E. Cherry, *Cities and Plans. The Shaping of Urban Britain in the Nineteenth and Twentieth Centuries* (London 1988), 157–66.

16 Turing, *Second series*, op. cit., 35–40.

17 Greater London Record Office, MCC/CC/L/EMD/45.

and disposal works. One would serve the Upper Lee above Hatfield. The most pressing was a scheme for the Middle Lee that would take the discharge of Harlow, Stevenage and Welwyn Garden City, and many of the older towns and villages, by intercepting sewers, to a point of treatment at Rye Meads, near Hoddesdon. The already intensively-urbanized length, the Lower Lee, would fall within the East Middlesex Drainage Scheme.

As a result of the most strenuous opposition from the Metropolitan Water Board to any notion of New Towns being designated in the Lee catchment, the Ministry of Health proposed that the effluents from the Middle Lee, amounting to a projected 10 mgd, should be treated at Rye Meads, but then taken by pipeline to a point of discharge below Chingford Mill, the lowest abstraction point on the river. At a meeting convened by the Clerk and General Manager of the Lee Conservancy Board, S.R. Hobday, in May 1947, guidance was sought as to the consequences for public health and amenity of a discharge of 50 mgd of treated sewage into the river (namely that from the Middle Lee and 40 mgd from the East Middlesex Drainage Scheme which was then under construction), at a point where there might only be 4 to 5 mgd of fresh diluting water. In a further joint report of May 1947, Balfour and Watson conceded that the more closely the problem was studied, the more perplexing it became. After considerable discussion, all acknowledged that the development of the New Towns was bound to go ahead and that the proposals for the removal of their wastes had to be accepted in principle. While there would be no immediate danger to public health, it was 'ultimately agreed' that a nuisance might arise, and that the point of discharge should ideally be in tidal water, or at least as far down the Lee as was economically feasible. In the event, a technical solution was found. From a series of experiments, conducted over a six-month period in 1950, it was found that the effluent from Rye Meads could be discharged directly into the gravels on which disposal works stood, without risk of the river becoming polluted.[18]

During the Second Reading debate on the Rivers (Prevention of Pollution) Bill in 1951, the Conservative Member of Parliament, Enoch Powell, emphasized the significance of the earlier Rivers (Prevention of Pollution) Act of 1876, that had given local authorities powers to tackle pollution. It had been 'one of the constellation of Acts' that had made Disraeli's administration of the 1870s 'a landmark in the social history of the country'. Before it could be repealed, there had to be an assurance that something better was being put in its place. Whereas the purpose of the earlier measure had been to define under what conditions a river might be regarded as polluted, and how any source of pollution could be entirely removed, the new licensing system was intended essentially to set a minimum (rather than an absolute) standard of purity. In his concluding speech to the Second Reading debate, the Parliamentary Secretary to the Ministry of Health, Arthur Blenkinsop, insisted that the

18 PRO, T 227, 563.

practical effect would be the same, namely to raise standards. Industry and local authorities would be set targets that were both appropriate to the watercourse, and attainable in terms of the skills and resources available. River Boards would be left in no doubt that the government's intention was to bring about a gradual and overall improvement in the quality of the water.[19]

However great the advances in legislation towards a more certain and comprehensive form of river management, everything continued to hinge on the firmness of administration. In his Buckland Lectures, Turing had warned how the interwar public health legislation, and most notably the Public Health (Drainage of Trade Premises) Act of 1937, was in danger of becoming just as inoperative as the Rivers (Prevention of Pollution) Act of 1876, through a combination of passive resistance on the part of polluters and a lack of will among those with a locus to seek improvement. None of the responsible parties needed to move unless another did so first. Those who suffered the consequences of river pollution might lack the means to obtain redress.[20] Frustration of this kind caused anglers, in the early 1950s, to embark on 'the biggest action' ever taken against a source of pollution. Whereas once the river Derwent, below Derby, had supported several million fish of different types, and the Trent Fishery Board and the Earl of Harrington's angling club had found it worthwhile to keep the river well stocked, the watercourse had become, since 1945, dirty, relatively hot, and carpeted with foul sludge and sewage fungus. No fish, nor other forms of normal fauna and flora, were to be found.[21]

It was just the kind of challenge which the Anglers' Co-operative Association had been founded, in 1949, to meet. While a riparian owner or lessee (which most angling clubs were) could seek redress under Common Law, very few could individually afford the high level costs. Recognizing the need for all parties to band together, John Eastwood, a Metropolitan Magistrate and one-time Member of Parliament, had formed the Anglers' Co-operative Association to provide the necessary backing. It already had to its credit two successful actions taken on behalf of working-men's angling clubs.[22] The new action was brought in the name of Lord Harrington and the Pride of Derby Angling Association. There were four defendants. British Celanese was sued for discharging into the Derwent, at Spondon, a range of cellulose, acetate and other organic wastes, arising from cotton keiring, dyeing and other processes. The action against Derby Corporation related to the discharge, immediately alongside, of up to six million gallons a day of effluent from its treatment and disposal works, constructed in the first years of the century and enlarged in the early 1930s. A third defendant, the British Electricity Authority, was sued for the discharge of heated waters, previously abstracted

19 PD, Commons, 481, 883–6 and 888–906.
20 Turing, *River Pollution*, op. cit., 66–7.
21 PRO, HLG 50, 2549–50 and 2598.
22 Anon., 'John Eastwood Memorial', *Salmon and Trout Magazine*, 136 (1952), 175–7.

and used for cooling purposes, in its power station further downstream. A fourth defendant, Midland Tar Distillers, had closed down.[23]

In the High Court, in April 1952, Mr Justice Harman made an Order, 'perpetually restraining' the defendants

> . . . from causing or permitting any effluent to flow or pass from their respective premises a) so as sensibly to alter (either by itself or in combination with any effluent discharged into the said river by any other of the said Defendants or any other person) the quality (including the temperature) of the water of the said River Derwent or the water of the River Trent.

Each defendant was to indemnify the plaintiffs in the proportion of 50 per cent from British Celanese, and 25 per cent each from the Derby Corporation and British Electricity Authority. They were to report within a year as to what steps had been taken to comply with the injunction, which was to be suspended for two years.

While the judgment raised no new points of law, officials of the Ministry of Housing and Local Government were appalled at its implications.[24] Although impossible to fulfil, in the sense that the streets and homes of Derby would be flooded if the discharges ceased, the judgment was expected to encourage similar actions elsewhere. The Corporation urgently sought the advice of its engineering consultants. They too were unaware of 'any reasonably practicable method of treating sewage' so as not to affect the river 'sensibly'. Even if the Corporation endeavoured to do all it could, the failure of the judgment to lay down any standard meant that it was impossible to know what might satisfy the court. Each small improvement would require an increasingly disproportionate additional cost.

The original hearing before Mr Justice Harman had lasted 15 days, and the Appeals brought by the Corporation and the British Electricity Authority before the Master of the Rolls, Sir Raymond Evershed, Lord Justice Denning and Lord Justice Romer in the Court of Appeal in December 1952 took up a further eight days. The appeal of the Electricity Authority was allowed, namely that the injunction should not be enforceable so long as the temperature of the discharged water was not high enough to harm fish. That of the Corporation was dismissed, with costs awarded to the original plaintiffs. Evershed supported the 'careful and admirable judgment'.

The Counsel for the Corporation, Sir Andrew Clark, asserted that the action under Common Law had been both inappropriate and unnecessary. In constructing and maintaining the sewage system, the Corporation had acted entirely and solely within its responsibilities, as laid down by the Derby Corporation Act of 1901. The pollution of the river by sewage had come

23 PRO, HLG 50, 2549–50 and 2598.

24 In early 1951, the responsibilities of the Ministry of Health for housing, local government, and water supply and sewerage, were transferred to the Ministry of Town and Country Planning, which was renamed the Ministry of Local Government and Planning. That Ministry was renamed the Ministry of Housing and Local Government following the election of a Conservative government in October 1951.

about, not through any negligence on the part of the Corporation, but through the increase in the local population. It was simply impossible for the Corporation to build the works required by the injunction within two years. While denying Evershed's observation that this was tantamount to saying that local authorities were above the law and that any injunctions granted against them were useless, Clark rejected the implication that, at the prompting of an action under Common Law, a Court should be able to determine how a sewage works should operate. Those who had brought the action had a perfectly good remedy under the Public Health Acts by applying to the Minister for an Order requiring the local authority to take such measures as were deemed necessary. The Court of Appeal agreed with counsel for the riparian owners in asserting that the Corporation could only evade direct responsibility for the effects of discharging filth into the river if it could find some statutory authority which deprived, or limited, the rights of those who might seek redress. Since none could be found, the injunction should be granted.

While the commencement of the action had antedated the Rivers (Prevention of Pollution) Act, a leader in *The Times* believed that the position of those charged with its administration had been strengthened. The Courts had found that such pollution as that experienced by the Derwent had never been legal. The *Birmingham Mail* claimed it 'one of the most important and encouraging judgments of our time'. Whatever their pretensions, the Courts had found the position of local authorities to be no different from that of ordinary citizens before the law. Tribute was paid to the role of the Anglers' Co-operative Association. Not only had it scorned faint-hearted talk of 'compromise', but it had challenged municipalities, and nationalized and private industries, despite their bottomless purses. Even though the wisdom of co-operation had been amply borne out, it had been a risky venture. If the Appeal had been upheld, the Association would have been 'finished'.[25]

British Celanese had always accepted the imposition of an injunction, subject to suspension. It had, accordingly, taken no part in the Appeal. Rather, the company pursued even more vigorously a solution, first canvassed by the Trent Fishery Board in late 1950, that the factory should follow what was increasingly recognized to be the most effective way of dealing with trade effluents, namely their treatment and discharge through sewage disposal works. Since the Corporation refused to enter into any kind of agreement until the injunction was lifted, the company served a formal notice under the Public Health (Drainage of Trade Premises) Act of 1937. Consent was sought for the discharge of six million gallons of effluent per day through the public sewers. When this was refused, British Celanese appealed in September 1952 to the Minister of Housing and Local Government.

Officials of the Ministry of Housing and Local Government were already fully aware of the seriousness of the situation. The factory was one of the largest in the country, producing almost all the UK output of cellulose and

25 *The Times*, 16 December 1952; *Birmingham Mail*, 16 December 1952; anon., 'A Fine Victory', *Salmon and Trout Magazine*, 138 (1953), 98–9.

acetate rayon. Through the Federation of British Industries, officials learned that the first inclination of the company had been to close the Spondon factory. Only after much hesitation was it agreed to meet the injunction. If operating conditions became too difficult, the factory might still close. The investment and employment would be transferred to another country. For the company, the issue was quite simply one of whether government policy, as embodied in the Public Health (Drainage of Trade Premises) Act, was to be adhered to, namely that all wastes, domestic and industrial, should be treated, wherever possible, in a single plant operated by the local authority. The Corporation protested that, since it had been adjudged to have failed in its Common Law duty to riparian owners, the most effective way of complying with the injunction was to deal solely with the Corporation's problems.

An Assistant Secretary, A. Titherley, warned colleagues that the Ministry could not hope to avoid exercising some responsibility for resolving the 'troubles'. Unless it intervened, there was a grave risk of the Corporation spending 12 months preparing a scheme, only to find that the Minister refused loan consent on the grounds that it took no account of the need to dispose of trade effluent. At a meeting in January 1953, Titherley reminded representatives of British Celanese that a local authority was not under any general obligation to accept industrial wastes — the Public Health (Drainage of Trade Premises) Act had provided safeguards and exceptions. In the Ministry's view, the Corporation was rightly concerned that, if the effluents were accepted into its sewers, it would become responsible for any difficulties that arose. Turning to the representatives of the Corporation, Titherley emphasized how their first step in responding to the injunction must be to extend the treatment and disposal works. Under the Public Health Acts, an application would have to be made for the Minister's consent to raise the necessary loan. British Celanese had already given a warning that it would oppose the application, unless the extended works made provision for the disposal of trade effluent. Titherley warned of the need for the Corporation to go thoroughly into the matter. In determining whether a loan should be sanctioned, the Minister would expect to be furnished with 'the fullest possible information' as to whether a common solution could be found.

Titherley put forward two suggestions. As plaintiffs, both parties might inform the High Court that a common solution was being sought. Although it would be far better than the two parties adopting separate solutions, it would take longer to develop. The Court would be asked to agree to the adoption of the common approach. A second course might be for any agreement under the Public Health (Drainage of Trade Premises) Act of 1937 to be conditional on British Celanese's giving the Corporation an indemnity against the consequences of any statutory proceedings, or action under Common Law, in respect of pollution arising from the factory's effluent. For their part, officials undertook to provide every assistance, both through the Ministry's technical staff, and in considering applications for investment and materials whereby a joint scheme might be carried out.

At the Ministry's instigation, the Corporation formally agreed to a joint investigation of the administrative and technical aspects. According to Sir Andrew Clark, the only safe course for the Corporation was for the Minister to issue an Order under the Public Health (Drainage of Trade Premises) Act of 1937, requiring the discharge of the factory's effluent into the sewers and thereby conferring, in Counsel's opinion, statutory protection on the Corporation. To that end, he suggested that British Celanese should be encouraged to make a further application for an Order. Officials regarded the advice as simply another attempt to pass the responsibility to the Minister. Nothing carried out, under the Act, could divest the Corporation of its liability, under Common Law, for any infringement of riparian rights.[26]

Officials found the legal opinion obtained by British Celanese to be far more realistic. Mr Milner Holland QC and H.F.J. Teague believed that the contending parties required not so much legal advice as the guidance of their respective technical advisers. It would be *ultra vires* for the Corporation to take the effluents until assured that there was no possibility of riparian rights being infringed. During a joint visit in late July, the Ministry's Chemical Inspector and Engineering Inspector found the 'settled' effluent from the Company's 'excellent pilot plant' to be of a high standard. The plant mixed the factory effluent with domestic sewage in the ratio of six to nine (the proportions in which they were produced). Still the Corporation hesitated, the Town Clerk protesting that he could not go before the Court with 'an abstract proposal'. If the Corporation waited until, say, the following April, when definitive results should be available from the pilot plant, it might be accused of dragging its feet. The Court might, however, be more amenable if the Corporation were able to demonstrate that such a delay had been required by the Ministry. Acknowledging that this might be the only way to ensure that the question of pollution was tackled as a whole, Titherley conceded that a cautiously-worded letter might be written. Sent to both parties in August 1954, it noted that it was the Corporation's intention to reconstruct its sewage disposal works at a cost of over £1 million. The Minister would not, however, be able to sanction loan consent unless it could be clearly shown that the Corporation had given full and detailed consideration to the practicability of its also disposing of the effluent from the factory. Definite conclusions as to the efficacy of combined treatment would not, however, be available until the experiments had run through the more difficult conditions of the winter months.

During a further inspection of the pilot plant in mid-January 1954, the Ministry's technical officers, this time with the Director of the Water Pollution Research Station present, learnt from the Borough Engineer that the Corporation had, in principle, accepted that the works, when extended, should receive the factory effluent. In April 1955, the Ministry received notice that a formal agreement had been drafted, whereby British Celanese would

26 PRO, HLG 50, 2549–50 and 2598; G. Greene, 'Experimental Work on the Treatment of the British Celanese Ltd Trade Waste', *Journal of the Institute of Sewage Purification*, 2 (1957), 116–22.

pay an annual treatment charge for the right to discharge 42 million gallons per day into the extended treatment and disposal works. The Corporation would receive for 15 years a fixed sum representing at least 500,000 gallons per day, irrespective of whether a discharge was made. A supplementary charge would be made, in the event of the Corporation's having to make further modifications to the extended works, so as to comply with the injunction. Having agreed in 1954 to a one-year extension, Mr Justice Harman conceded a final suspension of the injunction first until 30 April 1958, and then until August of that year, so as to allow completion of the extension works.

While the sentiment 'Never again' was negative in the sense of a generation wanting to turn its back on what had gone before, it provided the necessary stimulus for seeking improvements over an extraordinary range of activities, even within the environmental field. Far from that postwar generation thinking only of the 'necessities' of life, the straitened circumstances of life in the war and immediate postwar years appeared to instil an even greater awareness of the importance of an attractive and healthy environment. In his Buckland Lectures, Turing referred to the increasing public interest in fisheries and the country's rivers generally. Whereas previously a 'holocaust' in a local river might, at most, be a three-day wonder in the local press, there was now much greater understanding that fisheries acted as a sort of barometer, by which the condition of the river might be gauged. If fish could not live in the waters, they were not fit for human use either.[27]

The same desperate circumstances that had caused a wartime society to reappraise what constituted a full and rewarding life also precluded that goal being achieved, at least in the short term. Something of the frustration was revealed in a letter, written by the Clerk to the Ouse and Cam Fisheries Board in September 1944, protesting at the recent fish mortality. The same war situation that had caused the Supply Ministries to insist on a higher output from the canning factory at Huntingdon, precluded consents being given for the purifying plant needed to deal with the effluent or the construction of the new sewage disposal works that the Corporation had finally approved in 1939.[28]

The room for manoeuvre remained limited, even with postwar legislation in place. Far from being anxious lest the Rivers (Prevention of Pollution) Act of 1951 might prove ineffective, officials of the Ministry of Housing and Local Government were much more concerned to prevent its being implemented so rigidly as to have a catastrophic effect on industry. An Explanatory Circular emphasized how the Boards were expected to regulate by persuasion, rather than by prosecutions and other actions that might result in disproportionate

27 PRO, HLG 50, 2549–50 and 2598; J. Sheail, 'Public Interest and Self Interest: The Disposal of Trade Effluent in Interwar Britain', *Twentieth-Century British History*, 4 (1993), 149–70.
28 Turing, *River Pollution*, op. cit., 36–7.

expenditure or the closure of industry.[29] The resources available to sewerage authorities were similarly limited in fighting pollution. When challenged by the Minister of Housing and Local Government, Henry Brooke, in March 1957, as to why pollution on the river Trent had not been tackled more effectively, his Deputy Secretary conceded that little use had been made of the 1951 Act. The most recent annual report of the Trent River Board had estimated that an investment of some £50 million would be required to combat sewage pollution and the 'unusually high concentration of offensive wastes' from industry. There simply was not the public money for the very large programme of sewage treatment needed to secure a proper standard of effluent, even from domestic sources.[30]

By accommodating so large a range of objectives, even within the environmental sector of its legislative programme, a clash in priorities was even more likely to occur. While officials of the Ministry of Health might express concern as to the impact of the New Towns on water supplies and sewage disposal in the Lee Valley, the Minister, Aneurin Bevan, joined with the Minister of Town and Country Planning in insisting that the New Towns should be built as rapidly as possible. In Cabinet Committee in June 1946, he warned of how the demand for housing in the London area was so acute that it could not be satisfied by building within the urban fringes or redeveloping the blitzed areas. The only way of avoiding 'further uncontrolled sprawl into the green belt' was the construction of New Towns.[31] If there was to be compromise in avoiding the mistakes of the interwar years, it had in practice to be found by the water and sewerage utilities.

What emerges from the case studies is a striving for balance. Ways were sought of being sufficiently assertive to prevent any relapse into the ways of the interwar years without, at the same time, overextending the capacity of government to realize its objectives. In his official history of the New Towns Policy, Cullingworth cited Treasury misgivings of February 1947 concerning the dangers of the Ministry of Town and Country Planning biting off more than it could chew. Before more New Towns were approved, the Ministry should 'prove their capacity on a limited scheme'.[32] Not only was there concern as to the availability of labour and building materials, but also to the degree of public support for the inevitably higher costs of the amenity and modernity, which were deemed by town and country planners to be so much an integral part of the New Towns. Not a house could be built but an appropriate bit of sewer capacity and treatment plant had to be ready to serve it. Although the Development Corporations and Minister might say, '*That's* how the development and drainage of a town ought to be carried out', it was by no means certain that the New Town residents would find that the benefits to

29 PRO, MAF 41, 1463.
30 PRO, HLG 50, 2072.
31 PRO, HLG 50, 2056.
32 J.B. Cullingworth, *Environmental Planning. Volume III. New Towns Policy* (London 1979), 50–1.

themselves, as opposed to the community, justified the much higher rates needed to cover the investment.[33]

Such unease about the cost of providing the infrastructure required, say for New Towns, reflected not so much a lack of commitment to a more assertive form of planning, as an acute awareness of the limits of a more centralist style of government which even a postwar generation might be prepared to support. In order for a judgment to be reached as to where the balance should be struck, account had to be taken of not only the scale of investment required for a more centralized approach, but the extent to which it would be justified by a greater 'firmness of administration'. The Common Law action taken in respect of the river Derwent, and upheld first in the High Court and then in the Court of Appeal, emphasized the dangers of ignoring the frustration felt by individuals and voluntary interests confronted on the one hand by increasingly powerful bodies and, on the other, by a lack of equity in the management of a 'common' resource. The action demonstrated that, if properly organized, redress could be obtained. However attractive Common Law action might be, the difficulties experienced by industry, and local and central government, in trying to secure a technically sound and co-ordinated response to the Derby judgment also emphasized the clumsiness of such a legal instrument. The judgment may have highlighted the difficulties of securing a desired level of firmness in administration, but it did nothing to help find a solution. It was a dilemma that afflicted all utilities. As an official of the Ministry of Fuel and Power minuted in October 1956 in respect of the construction of the electricity supergrid, many of the procedures of the immediate postwar years had been formulated while 'there was still some hangover of the war mentality which led many people to accept the idea of planning and of some personal sacrifice'. Even before the Crichel Down controversy, 'a complete psychological change' had begun to take place, at least among the property-owning community.[34]

Acclaiming the Rivers (Prevention of Pollution) Act of 1951 to be 'a good practical piece of work', an editorial in the *Salmon and Trout Magazine* conceded that a 'masterpiece' was probably not possible.[35] There was much unfinished business or, more positively, only the first foundations of a more centralist policy. Even that was an achievement in the straitened economic circumstances, and in view of the well-founded anxieties as to the extent of public support for the institutional structures required to put such policies in place. Building on that modest incremental approach, a further Act of 1961, and the Control of Pollution Act of 1974, brought all discharges, new and old, within the licensing system. Under the Water Resources Act of 1963, the system was extended to include regulation of all forms of water usage. Full integration of water supply and waste disposal was achieved under the Water Act of 1973. In acknowledging the scope for conflict in water usage, a back-

33 Cullingworth, *Environmental Planning*, op. cit., 66.

34 PRO, POWE 14, 889; L.F. Nicolson, *The Mystery of Crichel Down* (Oxford 1986).

35 Anon., 'Rivers (Prevention of Pollution) Bill', *Salmon and Trout Magazine*, 133, (1951), 189–90.

ground paper emphasized the importance of having the knowledge with which to make a rational choice. The multi-purpose regional Water Authorities, appointed under the Act, would be equipped to take a broad view of all the functions arising from water-resource and river management.[36]

In 1989, the Water Authorities were privatized as water service companies. A non-departmental public body, the National Rivers Authority, was appointed, with statutory duties and powers covering water resources, pollution control, flood defence, fisheries, recreation, conservation and navigation in England and Wales. Its consent was needed both for the abstraction of water and discharges into water bodies. Its *Water Quality Strategy* of 1993 reported a gradual improvement over the previous 30 years. Not only had the number of major pollution incidents fallen, but the length of 'good' quality rivers, canals and estuaries had risen. Over 90 per cent of surface fresh water could be described as 'good' or 'fair', as opposed to 'bad'. However, evidence of a slowing-down, or reversal, of the trend in the most recent survey of all waters, in 1990, meant that there was no room for complacency. The most careful management would be needed to maintain present levels of water quality and simultaneously meet legitimate water needs. Further improvements would require 'positive and concerted action' from a wide range of organizations and individuals.[37]

John Sheail

is a Senior Principal Scientific Officer in the Institute of Terrestrial Ecology (Natural Environment Research Council), and Deputy Head of the Research Station at Monks Wood, Huntingdon, Cambs. A historical geographer, his 140 publications focus on attitudes toward the natural environment and the emergence of policies for its management.

36 Department of the Environment, *A Background to Water Reorganisation in England and Wales* (London 1973), 7–8.

37 National Rivers Authority, *Water Quality Strategy* (Bristol 1993), 4–6.